

SEQUENCE LISTING

SEQ ID NO:1-- Human Slo2 nucleotide sequence

5 ATGGCGCGGCCAAGCTGCCGCTCGCCGTCGAGGGCAAGGCGGGCCCGGGGGCGCCCCAGCCGGCGCCGAGCCCC
 CGAGGAGCCTCACGGGCTCAGCCCGTGTGCCGGCCCGCGCGGGGGCTCCGTGGGCAGCGACGTGGGCCAGAGGCTTC
 CTGTAGAAGATTTACGCCTGGACTCCTCCCTGTCTCAGGTCCAGGTGGAGTTCTACGTCAACGAGAACACCTTCAAGGAG
 CGGCTCAAGCTGTTCTTCATCAAAAACCAAGATCGAGCCTGAGGATCCGGCTGTTCAACTTCTCCCTGAAGCTGCTCAC
 CTGCTGTCTTACATTGTGCGCTCTGTCTCGATGACCCGGCCCTGGGCATCGGATGCTGGGGTGCCTCAAGCAGAAGT
 10 ACTCCTTCAATGACTCGCTCCGAGATCAACTGGGCTCCTATTCTGTGGGTGGAGAGAAAGATGACACTGTGGGCGATC
 CAGGTCATCGTGGCCATAATAAGCTTCTTGAGACGATGCTTCTCATCTACCTCAGCTACAAAGGCAACATCTGGGAGCA
 GATCTTCCCGTGTCTTCTGCTCTGGAGATGATCAACACTCTGCCCTTCATCATCAGATCTTCTGGCCGCCGTGCGGA
 ACCTGTTTCATCCCGCTCTTCTGAAGTGTGGCTGGCCAGCAGCGCTGGAAAACATGATTAATGACTTCCACCGTGCC
 ATCTGCGGACACAGTACGCCATGTTCAACCAGGTCTCATCTCTTCTGCACCTGCTGTGCTCGTTTTCACGGGGAC
 15 CTGCGGCATCCAGCACTGGAGCGGGCGGGCAGAACCTGTCCCTCTGACCTCCTTCTACTTCTGCATCGTCACCTTCT
 CCACCGTGGGTACCGTGACGTACGCCCAAGATCTGGCCATCGCAGTGTGGTGGTTCATCATGATCTGCGTGGCCCTC
 GTGGTGTCTCCACTGCAGTTCGAGGAGCTCGTCTACCTCTGGATGGAGCGGCAGAAAGTACAGGGGCAACTACAGCCGCCA
 CCGTGCGCAGACGAGAAGCAGTGGTCTGTGTGTGAGTCTCCCTCAAGATCGACCTTCTCATGACTTCTTGAACGAGT
 TCTACGCCCAACCCCGCTCCAGGACTATTACGTGGTTCATCTGTGCCCCACGGAGATGGATGTCCAGGTGCGCAGAGTC
 CTGCAGATCCCCTCTGTGGTCCAGCGGGTTCATCTACCTCCAGGGCTCTGCACTCAAAGACAGGACCTCATGCGAGCCAA
 20 GATGGACAATGGGGAGGCTGCTTCTCATCTCAGCAGCAGGAACGAGGTGGACCGCACGGCTGCAGACACCAGACCATCC
 TGGCGCCTGGGCGGTGAAGGACTTCGCCCCAACTGCCCTCTACGTCCAGATCCTCAAACCTGAAAACAAGTTTACAC
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 ATGGGCGTGTCTCCGCAACGAGGTGTACACATCCGCATGGGTGACAGCAAGTTCTTCCGCGAGTACGAGGGCAAGAGC
 25 TTACCTACCGCGCCCTTCACGCCCAAGAAGTATGGCGTGTGCTCATCGGGCTGAAGCGGGAGGACAACAAGAGCAT
 CCTGCTGAACCGGGGCCCGGCACATCTGGCCGCTCTGACACCTGCTTCTACATCAACATCACCAAGGAGGAGAACT
 CGGCCTTCATCTTCAAGCAGGAGGAGAAGCGGAAGAAGAGGGCTTCTCGGGGCGGGGCTGCACGAGGGTCCGGCCCGC
 CTGCCCCGTGCACAGCATCATCGCTCCATGGTGGCCATGGACCTGCAGGGCACAGAGCACCGGCTACGCAGAGCGGCGG
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 30 AACTGGCCGACAGCTCAGCCCTGTGCTGCGCTGCGACCTGTGAGCGACAGTCCGAGGATGAGGTGACGCCGTGCGACGAC
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 CGGGCTACTACAGATCCCGCAAGGAGTGAACCCCATCGTGTGCTGCTGCTGACACAAGCCCGACCACTTCTCTGGA
 35 AGCCATCTGTGCTTCCCCATGGTCTACTACATGGAGGGCTCTGTGGACAACCTGGACAGCCTGTGTCAGTGTGGCATCA
 TCTATGCGGACAACCTGGTGGTGGTGACAAGGAGAGCACCATGAGCGCCGAGGAGGACTACATGGCGGACGCCAAGACC
 ATCGTCAACGTGCAGACCATGTTCCGGCTCTTCCCGAGCCTCAGCATCACACGGAGCTACCCACCTTCCAACATGCG
 CTTCATGCAGTTCGCGCCAAGGACAGTACTCTGTGCTCTTCCAACTAGAAAAGAGGGAGCGAGAGAATGGCTCCA
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 40 TCCTTGTGAAGGACTACATGATCACCATCACCGGCTGTGCTGGGCTGGACACCGCCGGGCTCGGGGTACCTCTG
 TGCCATGAAAATCACCGAGGGGCGACCTGTGGATCCGACGTACGCGCCCTCTTCCAGAGCTCTGCTCTCCAGCGCCG
 AGATCCCCATTGGCATCTACCGGACAGAGAGCCAGTCTTCTCCACCTCGGAGCCCCACGACCTCAGAGCCAGTCCCAG
 ATCTCGGTGAACGTGGAGGACTGTGAGGACACACGGGAAGTGAAGGGGCCCTGGGGTCCCCGCTGGCACCGGAGGCAG
 CTCCAGGGCGGCCACACGGGCGGGTGACCCCGCAGAGCACCCTGCTACGGCGCAAGAGCCTGCAGTGGGCCCGGA
 45 GGCTGAGCCGCAAGGCGCCCAAGCAGGCGAGCCGGCGGCGGCGGAGTGGATCAGCCAGCAGCGCTCAGCCTGTAC
 CGGCGCTCTGAGCGCCAGGAGCTCTCCGAGCTGGTGAAGAACCAGCATGAAGACCTGGGGTGCCTACCACCGGCTACGA
 GGACGTAGCAAATTTAACAGCCAGTGTGTGATGAATCGGGTAAACCTGGGATATTTGCAAGACGAGATGAACGACCA
 AGAACACCTCTCTACGTCTCATCAACCTCCGCCGACAGAGGCTGGAGCCAGTGACATTGTCTATCTCATCCGC
 50 TCCGACCCCTGGCTCAGTGGCCAGCAGCTCCAGAGCCGGAAGAGCAGCTGCAGCCACAAGCTGTGCTCTGCAACCC
 CGAGACTCGCGACGAGACACAGCTCTAA

SEQ ID NO:2-- Human Slo2 amino acid sequence

MARAKLPRSPSEKAGPGGAPAGAAPEEPHGLSPLLPARGGSGVSDVGQRLPVEDFSLDSSLSQVQVEFYVNENTFKE
 RLKLFPIKNQRSSLRIRLFNFSKLLTCLLYIVRVLLDDPALGIGCWGCPKQNYSFNDSSSEINWAPILWVERKMTLWAI
 5 QVIVAIISFLETMLLIYLSYKGNIEQIFRVSVFLEMINTLPFIITIFWPLRLNLFIPVFLNCWLAKHALENMINDFHRA
 ILRTQSAFNPQVLLIFCTLLCLVFTGTGCIQHLELAGENLSLLTSFYFCIVTFSTVGYGDVTPKIWPSQLLVVIMICVAL
 VVLPLOQFEELVYLWMERQKSGGNYSRHRAQTEKHVVLCSLKDIDLLMDFLNEFYAHPRLQDYYVVLCPTEMDVQVRRV
 LQIPLWSQVRIYILQGSALKDQDLMRAKMDNGEACFILSSRNEVDRTAADHQITILRAWAVKDFAPNCPLYVQILKPKENKFH
 VKFADHVVCEECKYAMLALNCICPATSTLITLLVHTSRQEGQESPEQWQRMYGRCGSEVYHIRMGDSKFFREYEGKS
 10 FTYAAFAHKKYGVCLIGLKREDNKSILLNPGPRHILAASDTCFYINITKEENSAFIFKQEEKRKKRAFSGQGLHEGPAR
 LPVHSIIASMVAMDLOQTEHRPTQSGGGGSKLALPTENGSGSRRPSIAPVLELADSSALLPCDLLSDQSEDEVTPSSD
 EGLSVVEYVKGYPNSPYIVSSPTLCHLLPVKAPFCCLRLDKGCKHNSYEDAKAYGFKNKLIIVSAETAGNGLYNFIVPL
 RAYYRSRKELNPIVLLLDNKPDDHFLAICCFPMVYMEGSVDNLDLSLLQCGIIYADNLVVVDKESTMSAEEDYMADAKT
 IVNVQTMFRLFPPLSITTELTHPSNMRFMQFRAKDSYSLALSLEKREKRENGSNLAFMFRLPFAAGRVFSISMOLDLLYQ
 15 SFVKDYMITITRLLGLDTPGSGYLCAKITEGDLWIRTYGRFLQKLCSSSAEIPIGIYRTESHVFTSEPHDLRAQSQ
 ISVNVEDCEDTREVKGWPSRAGTGGSSQGRHTGGGDPAEHPLLRKSLQWARRLSRKAPKQAGRAAAEWISQQRSLY
 RRSEKQELSELVKNRMKHLGLPTTGIEDVANLTASDVNMRVNLGYLQDEMNDHQNTLSYVLINPPDTRLEPSDIVYLIR
 SDPLAHVASSSQSRKSSCSHKLSSCNPETRDETQL

SEQ ID NO:3--Human Slo4 nucleotide sequence

ATGTTTGATTTGGAGAGCGAAGTGCCCTCTGCTCCAGGTACAGTTTTCGAGATTTGCTGCTAGGGACCAAGGATG
 GCAAAACGACGACAGGTACAGTTGAATTCATATGAATGAAAATACATTTAAAGAAAGACTAAAATTATTTTTCATAA
 AAAACCAGAGATCAAGTCTAAGGATACGCTGTTCAATTTTCTCTCAAATTAAGCTGCTTATTATACATAATCCGA
 GTACTACTAGAAaAACCTTCACAAGGAAATGAATGCTCTCATATCTTTGGGTGAACAGAAGTCTACCTTTGTGGGGCTT
 25 ACAGGTTTCAGTGGCATTGATAAGTCTGTTTGAACAATATTACTTGGTTATCTTAGTTATAAGGAAACATCTGGGAAC
 AGATTTTACGAATACCTTCATCTTGGAAATAATTAATGCAGTTCCTTCATTATCTCAATATTCTGGCCTTCCTTAAGG
 AATCTATTTGTCCAGCTCTTCTGAACTGTTGGCTTGCCAAACATGCCTTGGAATAATGATTAAATGATCTACACAGAGC
 CATTACAGCTACACAGCTGCAATGTTTAATCAAGTTTTGATTTTAATATCTACATTACTATGCCTTATCTTACCTGCA
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 30 TCTACTGTGGGCTTCGGGGATGTCACTCCTGAAACATGCTCCTCAAGCTTTTGTAGTTGCTATGATTGTGTGCTCT
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 35 AGATGGATGACGCTGAGGCTGTTTTATTCTCAGTAGCCGTTGTGAAGTGATAGGACATCATCTGATCCTCAAAACAATT
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 CATCAAAATTTGCTGATCATGTTGTTTGTGAAGAAGAGTTTAAATACGCCATGTTAGCTTTAACTGTATATGCCAGCAA
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 40 TTTTACATATGCCTCTTTCATGACACAAAAAGTTGGCGTCTGCTTGATTGGTGTAGGAGGAGGATAATAAAAAACA
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 TCAGCATTAAAAACCAAGACCAGCAGAGAAAAAGCAATGTGTCCAGGTCGTTTATCATGGACCTTCCAGATTACCTGT
 ACATAGCATAATTGCCAGCATGGGTACTGTGGCTATAGACTTGCAAGATACAAGCTGTAGATCAGCAAGTGGCCCTACCC
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 45 ATTCAAACATGTGATCTTCTAAGTGACCAATCAGAAGATGAACTACACCAGATGAAGAAATGTCTTCAAACCTTAGAGTA
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 50 TTTACTACATGGTGGGCTCTATTGACAACCTAGATGACTTACTCAGGTGTGGAGTGACTTTTGTCTGCTAATATGGTGGTT

GTGGATAAAGAGAGCACCATGAGTGCCGAGGAAGACTACATGGCAGATGCCAAAACCATTTGTGAACGTGCAGACACTCTT
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CCTTTTGCTGCTGGGAGGGTGTTTAGCATCAGTATGTTGGACACTCTGCTGTATCAGTCATTTGTGAAGGATTATATGAT
5 TTCTATCACGAGACTTCTGTTGGGACTGGACACTACACCAGGATCTGGGTTTCTTTGTTCTATGAAAATCACTGCAGATG
ACTTATGGATCAGAACTTATGCCAGACTTTATCAGAAGTTGTGTTCTTCTACTGGAGATGTTCCCATTGGAATCTACAGG
ACTGAGTCTCAGAACTTACTACATCTGAGTCTCAAATATCTATCAGTGTAGAAGAGTGGGAAGACACCAAAGACTCCAA
AGAACAAGGGCACCACCGCAGCAACCACCGCAACTCAACATCCAGTGACCACTCGGACCATCCCTTGCTGCGGAGAAAAA
GCATGCAGTGGGCCCCAAGACTGAGCAGAAAAGGCCAAAACACTCTGGTAAAACAGCTGAAAAAATAACCCAGCAGCGA
10 CTGAACCTCTACAGGAGGTGAGAAAGACAAGAGCTTGCTGAACCTGTGAAAAATAGAATGAAACACTTGGGTCTTTCTAC
AGTGGGATATGATGAAATGAATGATCATCAAAGTACCCTCTCTACATCTTGATTAAACCATCTCCAGATACCAGAATAG
AGCTGAATGATGTTGTATACTTAATTCGACCAGATCCACTGGCTACCTTCCAAACAGTGAGCCAGTCGAAGAAACAGC
ATCTGCAATGTCACTGGTCAAGATTCTCGGAGGAAACTCAACTTTGA

15 SEQ ID NO:4--Human Slo4 amino acid sequence

MVDLESEVPPLPPRYRFRDLLLDQGWQNDNRVQVEFYMNENTFKERLKLFFIKNQRSSLRIRLFNFSCLKLLSCLLYIIR
VLLNPSQGNESWHIFWVNRSLPLWGLQVSVLISLFETILLGYLSYKGNIEWEQILRIPFILEIINAVPFIISIFWPSLR
NLFVPVFLNCWLAKHALENMINDLHRAIQRQTQSAMFNQVLILISTLLCLIFTICIGIQHLERIGKKNLFDLSLYFCIVTF
STVGFGDVTPEWSSKLFVVMICVALVVLPIQFEQLAYLWMERQKSGGNYSRHRAQTEKHVVLCVSSLKIDLLMDFLNE
20 FYAHPRLQDYVVLCPTEMDVQVRRVLQIPMWSQRVIYLQGSALKDQDLLRAKMDDAEACFILSSRCEVDRTSSDHQTI
LRAWAVKDFAPNCPYVQILKPENKFHIFADHVVEEYKAMALNCICPATSTLITLLVHTSRGQEGQQSPEQWQKM
YGRCSGNEVYHIVLEESTFFAEYEGKSFTYASFHAKKFGVCLIGVRREDNKNILLNPGPRYIMNSTDICFYINITKEEN
SAFNQDQQRKSNVRSFYHGFSRLPVHSIIASMGTVADLQDTS CRSASGPTLSLPTEGSKEIRRPSIAPVLEVADTSS
IQTCDLLSDQSEDETTPEDESSNLEYAKGYPPYSFYIGSSPTFCHLLHEKVPFCLRLDKSCQHNYEDAKAYGFKNKL
25 IIVAAETAGNLYNFIVPLRAYRPKKELNPIVLLLDNPPDMHFLDAICWFPVYVMVGSIDNLDLLRCGVTFAANMVV
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PFAAGRVFSISMLDTLLYQSFVKDYMSITRLLGLDTPGSGFLCSMKITADDLWIRTYARLYQKLCSSSTGDPVPIGIYR
TESQKLTTSESQISISVEEWEDTKDSKEQGHRSNHRNSTSSDQSDHPLLRKSMQWARRLSRKGPKHSGKTAEKITQQR
LNLYRRSERQELAEVLKRMKHLGLSTVGYDEMNDHQSTLSYILINPSPDTRIELNDVVYLIRPDPLAYLPNSEPSRRNS
30 ICNVTGQDSREETQL